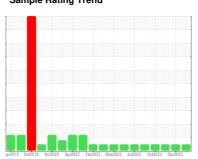


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



428058-402378

Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

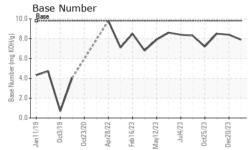
Fluid Condition

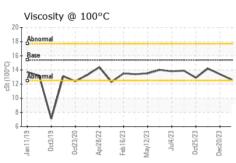
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Cample Number Client Info CFL0105320 CFL0090312 CFL0090314 Client Info Changed Info Client Info Changed NoRMAL NORM	iAL)		an 2019 Oct20	19 Oct2020 Apr2022 Fe	b2023 May2023 Jul2023 Oct2023	Dec2023	
Client Info 02 Feb 2024 20 Dec 2023 09 Nov 2023	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 13374 13161 19251	Sample Number		Client Info		GFL0105320	GFL0090321	GFL0090314
Oil Age	Sample Date		Client Info		02 Feb 2024	20 Dec 2023	09 Nov 2023
Contained Client Info Changed Northanged Northa	Machine Age	hrs	Client Info		13374	13161	19251
NORMAL NORMAL NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 history2 water WC Method >5 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	Oil Age	hrs	Client Info		600	150	600
CONTAMINATION method limit/base current history1 history2	Oil Changed		Client Info		Changed	Not Changd	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method >0.2 NEG A Wand Depm ASTM D5185m 25 2 0 0 1 1 1 <t< td=""><td>CONTAMINAT</td><td>ION</td><td>method</td><td>limit/base</td><th>current</th><td>history1</td><td>history2</td></t<>	CONTAMINAT	ION	method	limit/base	current	history1	history2
NEG Neg	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >110 10 2 14 Chromium ppm ASTM D5185m >4 <1	Water		WC Method	>0.2	NEG	NEG	NEG
ASTM D5185m	Glycol		WC Method		NEG	NEG	NEG
Chromium	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	ron	ppm	ASTM D5185m	>110	10	2	14
Description	Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Description	Nickel	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	Titanium	ppm	ASTM D5185m		0	0	<1
Lead	Silver	ppm	ASTM D5185m	>2	0	0	<1
Copper	Aluminum	ppm	ASTM D5185m	>25	2	<1	2
Proceedings Proceedings Processes	_ead	ppm	ASTM D5185m	>45	1	<1	<1
Vanadium ppm ASTM D5185m <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Copper	ppm	ASTM D5185m	>85	<1	<1	3
ADDITIVES	Γin	ppm	ASTM D5185m	>4	0	0	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	<1	<1
Serium	Cadmium	ppm	ASTM D5185m		0	0	<1
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 56 53 59 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	0	0	0	<1
Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 901 910 905 Calcium ppm ASTM D5185m 1070 978 962 1010 Phosphorus ppm ASTM D5185m 1150 973 1012 1039 Zinc ppm ASTM D5185m 1270 1196 1198 1171 Sulfur ppm ASTM D5185m 2060 2919 2985 2704 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 5 Sodium ppm ASTM D5185m >20 3 0 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7845	Barium	ppm	ASTM D5185m	0	0	0	<1
Magnesium ppm ASTM D5185m 1010 901 910 905 Calcium ppm ASTM D5185m 1070 978 962 1010 Phosphorus ppm ASTM D5185m 1150 973 1012 1039 Zinc ppm ASTM D5185m 1270 1196 1198 1171 Sulfur ppm ASTM D5185m 2060 2919 2985 2704 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 5 Sodium ppm ASTM D5185m >20 3 0 4 Potassium ppm ASTM D5185m >20 3 0 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7414	Molybdenum	ppm	ASTM D5185m	60	56	53	59
Calcium ppm ASTM D5185m 1070 978 962 1010 Phosphorus ppm ASTM D5185m 1150 973 1012 1039 Zinc ppm ASTM D5185m 1270 1196 1198 1171 Sulfur ppm ASTM D5185m 2060 2919 2985 2704 CONTAMINANTS method limit/base current history1 history2 Solicon ppm ASTM D5185m >30 4 3 5 Solium ppm ASTM D5185m >20 3 0 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGR	Manganese	ppm	ASTM D5185m	0	<1	0	<1
Phosphorus ppm ASTM D5185m 1150 973 1012 1039 Zinc ppm ASTM D5185m 1270 1196 1198 1171 Sulfur ppm ASTM D5185m 2060 2919 2985 2704 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 5 Sodium ppm ASTM D5185m 4 3 22 Potassium ppm ASTM D5185m >20 3 0 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base <td>Magnesium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>1010</td> <th>901</th> <td>910</td> <td>905</td>	Magnesium	ppm	ASTM D5185m	1010	901	910	905
Zinc ppm ASTM D5185m 1270 1196 1198 1171 Sulfur ppm ASTM D5185m 2060 2919 2985 2704 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 5 Sodium ppm ASTM D5185m >20 3 0 4 Potassium ppm ASTM D5185m >20 3 0 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Ab	Calcium	ppm	ASTM D5185m	1070	978	962	1010
Sulfur ppm ASTM D5185m 2060 2919 2985 2704 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 5 Sodium ppm ASTM D5185m 4 3 22 Potassium ppm ASTM D5185m >20 3 0 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.0 13.7	Phosphorus	ppm	ASTM D5185m	1150	973	1012	1039
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 5 Sodium ppm ASTM D5185m 4 3 22 Potassium ppm ASTM D5185m >20 3 0 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.0 13.7	Zinc	ppm	ASTM D5185m	1270	1196	1198	1171
Silicon ppm ASTM D5185m >30 4 3 5 Sodium ppm ASTM D5185m 4 3 22 Potassium ppm ASTM D5185m >20 3 0 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.0 13.7	Sulfur	ppm	ASTM D5185m	2060	2919	2985	2704
Sodium ppm ASTM D5185m 4 3 22 Potassium ppm ASTM D5185m >20 3 0 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.0 13.7	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 3 0 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.0 13.7	Silicon	ppm	ASTM D5185m	>30	4	3	5
INFRA-RED	Sodium	ppm	ASTM D5185m		4	3	22
Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.0 13.7	Potassium	ppm	ASTM D5185m	>20	3	0	4
Nitration Abs/cm *ASTM D7624 >20 7.4 5.9 5.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.0 13.7	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.0 13.7	Soot %	%	*ASTM D7844	>3	0.3	0.2	0.3
Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.4 18.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.0 13.7	Nitration	Abs/cm	*ASTM D7624	>20	7.4	5.9	5.7
Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.0 13.7	Sulfation						18.4
	FLUID DEGRA	OITAC	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.9	14.0	13.7
	Base Number (BN)	mg KOH/g			7.9	8.4	8.5



OIL ANALYSIS REPORT

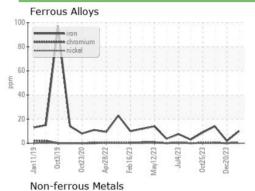


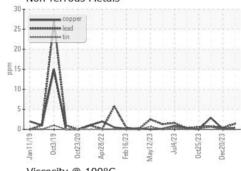


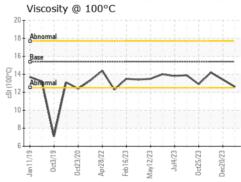
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

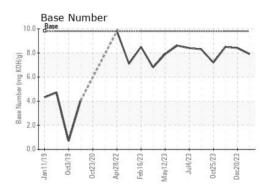
FLUID PROPE	RHES	metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.4	12.6	13.4	14.2

GRAPHS













Certificate L2367

Laboratory

Sample No. Lab Number : 06081072 Unique Number : 10863163 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 06 Feb 2024 : GFL0105320 Recieved

Diagnosed : 06 Feb 2024 Diagnostician : Wes Davis

GFL Environmental - 821 - Ozarks Hauling

33924 Olath Drive Lebanon, MO US 65536

Contact: Landen Johnson landen.johnson@gflenv.com T: (417)664-0010

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)